Pheasant Ecology Part 1: Nesting & Brood-Rearing Season

By Travis Runia, re-printed with permission from the South Dakota GFP Digest

With nearly six months until friends and family gather to partake in the traditional opening day hunt, pheasants are one of the last things sportsmen are thinking about during spring. However, the nesting and brood-rearing season of May and June represent one of the most critical times for pheasant populations.

Pheasants are short lived birds with annual survival averaging only 50%. During severe winters such as 2009-2010, survival can be much lower in areas containing marginal or inadequate winter habitat. With such low survival, how do pheasants sustain such high populations each fall? Of all upland game birds, pheasants exhibit one of the highest reproductive potentials, thus enabling them to bounce back after severe losses in short time periods when provided adequate nesting habitat. Despite this, pheasants still rely on quality nesting and brood rearing habitat to recruit new birds to the fall population.

The nesting season begins in late April as hens seek out attractive nesting cover usually consisting of undisturbed grasslands such as lands enrolled in the Conservation Reserve Program (CRP). Most hens initiate their first nest during the first half of May, but this can be delayed by unseasonably cold or wet weather. Males have spent the past month establishing and maintaining territories across the landscape. Crowing and wing flapping behavior aimed at attracting females peaks in April but continues through June to serve re-nesting hens.

After courtship, hens lay one egg per day until a full clutch of 10-12 eggs is reached. During the next 23 days, hens will spend 23 hours per day incubating the eggs and leaving for only short intervals for limited amounts of food and water. Egg laying and incubation is extremely energy demanding, and during this incubation period food intake in low. Hens can lose 75% of their body fat and 10% of their body weight in just one month! If not challenging enough, only about 25% of nests are successful in large blocks of undisturbed grasslands and success has been documented much lower in linear and fragmented habitats which are generally smaller in size and are more vulnerable to mammalian predators.

Fortunately, pheasants almost always re-nest and may initiate up to 4 nests in a single season if previous nests are destroyed. Because of the energy demands of producing and incubating eggs, clutch size and egg size decrease for each subsequent nesting attempt. If a third nesting attempt is initiated, the clutch size could be as low as 5 or 6 eggs. Even with low success of each individual nest, 70% of hens may pull off one successful nest through multiple nesting attempts. Hatching a successful clutch is only half the battle to recruit pheasants to the fall populations. Pheasant chicks are precocial, meaning they hatch with eyes open and are able to leave the nest and feed themselves within one day of hatching. However, it has been documented that 1 and 2 day old chicks exposed to 43 degree temperatures die after 30 minutes of exposure. Susceptibility to the cold quickly decreases with age, and by 11 days of age the chicks can fully regulate their body temperature. Cold snaps in June can greatly decrease chick survival.

As stated earlier, pheasants are attracted to undisturbed grasslands for nesting sites, such as land enrolled in CRP. But does this same habitat provide for the needs of pheasant chicks? This depends on the structure and composition of the grasslands. Ideal brood-rearing habitat provides abundant insects, aerial concealment, and allows movement at ground level by small pheasant chicks. The average grass field which has not been disturbed recently and lacks diversity does not meet these criteria. Can you imagine a tennis ball sized pheasant chick navigating through thick seven foot tall grass that your Labrador struggles to get through in the fall!

Pheasant chicks primarily eat insects during the first 1-2 weeks of life because they are high in protein. Protein functions as building blocks to form muscle tissue and feathers which allows for rapid chick growth. Without plentiful insects, growth rates and survival of chicks can be greatly reduced. Hen pheasants will often move her brood great distances to find suitable brooding habitat such as "weedy" areas. Broadleaf plants act like insect factories, while also providing aerial concealment without impeding chick movement at ground level. Aerial concealment protects chicks from aerial predators and provides shade during those hot summer days. Even when good habitat is available, it is not uncommon for 1/3 of the chicks to die with predators, extreme weather, and farm machinery representing the highest mortality factors.

South Dakota is fortunate to have an abundance of high quality nesting and brood-rearing habitat which allows pheasants to reach their high reproductive potential. As you head to the field each year, remember that what pheasants were doing in May and June has a huge influence on what you will see each fall.

Farmers- need a tax deduction this year? Consider donating some grain or land to the SDWF. You will get a tax break and your support of the SDWF will help protect the land and wildlife you love.
Most of South Dakota has been fortunate this year in receiving moisture and it looks like we’ll have good habitat. It’s time to grow some bugs and get the heat of summer going. It’s very green with lots of pheasants running in the road ditches; with lots of pheasants gathering to do what they do this time of year. At this time last year, I didn’t see any birds when driving home. Despite the predictions last year, pheasant hunting was good this year after the crops were out of the ground. I predict SD will have a lot better pheasant season than last year, I’m looking forward to the end of August for GF&P’s Annual Pheasant Brood Survey.

SDWF recently drew names for the 11 lucky winners of SDWF’s 21-Gun Giveaway. Their names and states are listed below. A very big THANK YOU to all of you who bought tickets and support us in so many ways.

Robbie Brooks
SD

Donald Dangers
MN

Dennis Swavelly
MN

Jim Gossen
MN

Daniel Chaloupka
SD

Tom Reaser
MN

Paul Moser
SD

Jory Freeburg
SD

Harry Haywood
AK

Lee Thorson
ND

As I write this column, there are nearly 120 young adults and many volunteers getting ready to head to Custer State Park for SDWF’s 51st Annual Camp Bob Marshall. I cannot say thank you enough to the many volunteers that give their time to teach conservation to our young adults and the clubs, organizations, and individuals that send these young adults to camp.
As I write this, it’s gloomy and rainy, but I’m hopeful that winter is finally losing its grip on our land. Long winters are not fun, but we South Dakotans are tough people. We know how to survive. When outsiders ask me how I can live in South Dakota, I tell them, “There are no wussies where I live.” Some chuckle and some take offense, but it’s true.

It’s also funny when I hear some talking about global warming. “How the hell can we have global warming when it’s so @%$$ cold out?” Unfortunately, the one or two degrees that the earth is warming doesn’t seem like that big of deal, but it’s causing devastation around the world. “Climate change” is a more accurate description, and generally the majority of people now agree that it’s happening.

Still, there are those who don’t like the changes that need to take place to save the planet—if it’s even possible now. We are losing wildlife and forests because it’s not staying cold long enough to kill the mites infecting our deer, or the pine beetles destroying the Black Hills. There have been destructive storms across the globe, and people along the coasts have seen the ocean levels rising. It’s not good.

Remember, SDWF is more than a hook and bullet organization. We care about our land, air, water and world. We care about people. We all need to do our part to protect our planet. Our generation has not done a good job of leaving our kids a better world than the one we got from the generations before us. Let’s do better!

My much older brother Mark and I just returned from Baltimore where we were delegates at the 78th annual NWF Convention. As the saying goes, “It’s a nice place to visit, but I wouldn’t want to live there!” We were both especially appalled at how polluted the Harbor water was! It’s part of the Chesapeake Bay, and it’s horrible.

As you may remember, Marty Jackley, South Dakota’s Attorney General, is part of a lawsuit with other states preventing the Clean Water Act from being enforced so the Bay can be cleaned up. Why? I’ve heard it’s because South Dakota and other states might have to clean up our waterways. Seriously? Marty, if you saw that dirty, polluted water, you’d change your mind. Yes it’s going to cost money, but it’s about time we put people before the almighty dollar.

Representatives from 49 affiliates across the United States attended, and 14 resolutions were passed. The purpose of the resolutions is to provide guidance and foundation for policy positions of the Federation. Some of the resolutions included:

- Banning imports/export of deer from game farms to prevent the spread of Chronic Wasting Disease
- Updating the Duck Stamp fee (which hasn’t increased since 1991) to help provide more habitat and access. Did you know 50% of the nation’s original wetlands have been destroyed and we are losing thousands of acres more each year? And one of the founders of NWF, Ding Darling, was the creator of the first Duck Stamp!
- Rejecting legislation that will transfer or sell our public lands.
- Supporting the North American Model of Fish and Wildlife Conservation:
  1. Wildlife is a public resource. A wild animal is owned by no one until it is physically possessed. Wildlife is held in common ownership by the state for the benefit of all people.
  2. Prohibition on commerce of dead wildlife. It is illegal to buy and sell wild meat and parts of game and nongame species. Furbearers, however, are managed as a sustainable resource.
  3. Allocation of wildlife by law. States allocate surplus wildlife by law, not by market pressures, land ownership or special privilege. The public gets a say in how wildlife resources are allocated; the process fosters public involvement in managing wildlife.
  4. Wildlife can only be killed for a legitimate purpose. The law prohibits killing wildlife for frivolous reasons. Under the “Code of the Sportsman,” hunters use as much as they can.
  5. Wildlife species are considered an international resource. Some species, such as certain migratory birds, fish and big game, transcend political boundaries, and one country’s management can easily affect the populations of the same species in another country.
  6. Science is the proper tool for discharge of wildlife policy. Sport hunting and the federal aid dollars that it provides to the Fish and Wildlife Agencies provide funds to conduct scientific, professional management. Science-based, professional wildlife management took off with passage of the 1937 Federal Aid in Wildlife Restoration Program, whereby excise taxes on hunting equipment are returned to states for wildlife management, restoration and research, along with hunter education that benefits all species, not just game or nongame.
  7. The democracy of hunting. In the European model, wildlife was allocated by land ownership and privilege. In North America, anyone in good standing can participate.

Remember: a great way to help make sure the world is better for your children and grandchildren is to get involved and ask “JUST ONE” friend to join SDWF.

**SD WILDLIFE ACTION DRAFT PLAN REVISION AVAILABLE FOR REVIEW**


South Dakota’s draft plan revision provides a habitat-based framework to help prevent future endangered species listings and keep common species common. Some fish and wildlife species that are not game species may have special habitat or restoration needs.

The draft plan also includes descriptions and identified needs for species of conservation concern as well as challenges and actions that relate to fish and wildlife species and habitats.

The draft plan is available at http://gfp.sd.gov/wildlife/management/plans/wildlife-action-plan.aspx. Comments must be received by June 6, 2014, and can be submitted via email to wildinfo@state.sd.us.

About the South Dakota Wildlife Action Plan: A state plan is required in return for State Wildlife Grant funds which provide a federal match to state wildlife agencies to focus on the needs of species that may be rare or unstudied. The first version was prepared in 2005 to provide for the needs of all fish and wildlife species across South Dakota and to bring together voluntary partnerships among agencies, tribes, organizations and citizens to benefit wildlife and their habitats.

President, Rich Widman

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**Out Of Doors 3 May 2014**

**President’s Column by Rich Widman**

"Over the long haul of life on this planet, it is the ecologists, and not the bookkeepers of business, who are the ultimate accountants." Stewart Udall
SDWF ANNOUNCES WILDLIFE WEEK POSTER WINNERS

SDWF announces the winners of the annual Wildlife Week Poster Contest. Many of our affiliates from across the state selected their local winning posters and entered them into the statewide competition. This year’s contest had a lot of entrants and the winning selections were made with great difficulty.

SDWF pays $25, $15, and $10 to each 1st, 2nd, and 3rd place winner, respectively, from all six grades.

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<td>2nd place  Luke Olson</td>
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<td>3rd place  Chloe Furman</td>
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<td>2nd place  Jilianne Ellerton</td>
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<td>2nd place  Piper Jones</td>
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<td>3rd place  Ashlyn Vander Vorst</td>
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Karter Mebius, 1st Grade
Wessington Elementary, Jerauld Country Chapter

Crew Heier, 2nd Grade
Grasslake Conservation Club

Patrick Valentine, 3rd Grade
Jefferson School, Pierre SD
Ryley Serverson, 4th Grade
Grasslake Conservation Club

Cord Ellis, 5th Grade
St Joseph School, Pierre SD

Cooper Gulbraa, 6th Grade
Grasslake Conservation Club
SD Wildlife Federation Donors

At the 2003 Winter Board Meeting, the SDWF Board created the SDWF Wildlife Legacy Council. The Council was created to allow recognition of the people who support SDWF above and beyond their membership and raffle donations.

Thank you to the following donors for their contributions to the SDWF. Please consider becoming a member of the Wildlife Legacy Council. SDWF is a 501(c3) non-profit, all donations are tax deductible. These tax-deductible contributions will speak volumes for the future of the SDWF’s Wildlife Legacy Council! Please consider your donation today. Donations can be sent to: SDWF, PO Box 7075, Pierre, SD 57501.

The Legacy Council consists of five different donation levels. These donation levels were revised October 2011 to: Level V Eagle $1,000 & above; Level IV Buffalo $501 - $999; Level III Elk $301 - $500; Level II Deer $201 - $300; and Level I Pheasant $100 - $200.

Love the outdoors and need a tax deduction this year? If you have a car, van, truck, ATV, or boat that's in reasonably good shape and you aren't using, donate it to the SDWF. You'll get a nice tax break and will feel great knowing you helped our great organization protect South Dakota's outdoors.

“JUST ONE”

New Member Program

The SDWF has approximately 3,000 members. We are constantly fighting to keep our outdoor heritage and to conserve our natural resources. We can’t continue without our members and we can’t keep fighting unless we grow our membership.

Encourage your friends that enjoy the outdoors to join the SDWF directly or through a local affiliate club. “JUST ONE” new member can make a world of difference!

SDWF Membership Application

To continue our conservation efforts - we need your help! Please donate generously.

Name: ____________________________  Address: ____________________________
City: ____________________________  State: __________  Zip: __________
Phone: ____________________________  e-mail: ____________________________
SDWF S20/Yr Membership Fee $ ______  SDWF Camo-Coalition lobbyng donation: $_____

Send Donation and Membership Application to:
SDWF
P.O Box 7075
Pierre, SD 57501-0952

☐ Check - make checks payable to SDWF
☐ CC__________  CV__________  EXP__________

South Dakota Wildlife Federation

“Just one” new member can make a world of difference!

South Dakota Wildlife Federation

In the 1980’s, hunting and fishing was just变为 just as important as defense abroad. Otherwise what is there to defend?” Robert Redford, Yosemite National Park dedication, 1985
PIERRE, S.D. - A Chamberlain man has landed the largest fish ever recorded by an angler in South Dakota. Earlier this month, Bill Harmon shattered a 35-year-old record when he snagged a 127 lb., 9 oz. paddlefish on May 7.

Harmon drew a permit for the Lake Francis Case paddlefish snagging season. His fish surpassed the old record of 120 lb. 12 oz. set by Don Gregg in April 1979 in the Ft. Randall tailwaters.

Annual stocking efforts of paddlefish began in the early 1990s and have resulted in quality numbers of the species in Lake Francis Case. Jason Sorensen, SD Game, Fish and Parks' fisheries biologist, noted, "One of the original goals of the paddlefish stocking program was to initiate a sport fishery for this species. Paddlefish are a long-lived species and the Lake Francis Case population has some very old fish. There is potential for anglers to harvest large paddlefish and Bills' recent catch is proof of that."

Paddlefish are among the largest and longest lived species of freshwater fishes. Native to the Mississippi River drainage, these prehistoric fish once roamed freely throughout the network of rivers in the central United States. From the Yellowstone and Missouri Rivers in the west to the Ohio and Allegheny Rivers in the east, paddlefish are believed to have made long seasonal migrations throughout the Mississippi River basin.

The unusual appearance of paddlefish amazed early European explorers. Different from most fish species, paddlefish can best be distinguished by their very large mouths and a paddle-shaped snout that is about one third their body length. Paddlefish are bluish-gray in color and appear dark when viewed from above. Similar to many freshwater fishes, they are white on the bottom. Paddlefish lack scales and have smooth skin similar to catfish.

Paddlefish feed primarily on zooplankton (microscopic "bugs") by swimming with their mouths open and filtering zooplankton out of the water with their gill rakers. Since paddlefish do not feed on bait fish and invertebrates, conventional fishing methods prove useless to anglers pursuing paddlefish. Anglers typically snag for paddlefish using heavy-duty equipment and heavy fishing lines.

To view a list of all of South Dakota's state record fish, visit http://www.gfp.sd.gov/fishing-boating/state-fish-records-list.aspx#UNRESTRICTED.

For a fish to qualify as a state record, anglers must have the fish identified by a state fisheries biologist and weighed on a certified scale. Other qualifications can be found on the state record fish application: http://www.gfp.sd.gov/fishing-boating/docs/state-record-fish-form.pdf.
Hipple Lake’s connection to Lake Sharpe was nearly silted in during the 2011 flooding. "That was the impetus behind the study," Fincel said.

"One of the largest spawn areas that we know of is Hipple Lake," said Fisheries Biologist Mark Fincel. "There are so many shad hatched each year that Gizzard shad make up more than 90 percent of the prey eaten by Lake Sharpe's walleye and small mouth bass."

"We think we have the bulk of our reproduction in Hipple Lake," Fincel said. "We think that warm water bait fish weather South Dakota's harsh winters, Fincel said."

"Right now there isn't a lot of information about gizzard shad movement," Fincel said. "It was a large adult gizzard shad caught in the northern end of Hipple Lake and it was expressing its displeasure at being outfitted with a radio transmitter by flopping out of its surgical cradle."

"We were pretty successful," GF&P Commission Chairman John Cooper said wryly. "Now we're at the point where cutbacks are necessary" to prevent further declines and to allow deer numbers to grow again.

CRP losses

"In addition to aggressive harvest targets, other factors hammered deer herds in the past half-dozen years. These include outbreaks of epizootic hemorrhagic disease that killed many whitetail bucks, drought and severe winter weather. Changes in mule deer forage West River and the loss of Conservation Reserve Program cover. From a high of 1.6 million acres in 2007, CRP in South Dakota has declined to about 900,000 acres now, and another 280,000 acres could come out of the federal set-aside program next year.

People encroaching

In states farther west and to a lesser degree in South Dakota, said Cooper, invasive cheatgrass is replacing native plant species mule deer rely on for forage. Mule deer also are less tolerant of development than are whitetails.

"A lot of people are moving into mule deer range and building their 10-to-15-acre ranchettes. That is affecting their habitat," Cooper said.

GF&P has developed a strong communication network with the public through annual surveys. After four or five years of pressure to reduce the deer herd, said GF&P Wildlife Division Director Tony Leif, "now we're confident the public wants us to manage for a few more deer. That's the general consensus."

Revenue loss

The sharp reduction in doe tags, he said, should allow herds across the state to stabilize and, in some cases, to grow. But it also would shrink the department’s revenue.

After pheasant hunting, deer hunting is GF&P's largest revenue source. The revenue hit from the sharp reduction in deer tags is yet to be determined, Cooper said. Meanwhile, the number of pheasant hunters has declined three straight years. As a result, "we're not as fat as we were four years ago on the revenue stream," Cooper said.

Managing wildlife responsibly is the department's first priority, Leif said. But a loss of revenue from reducing deer hunting will be noticed. "We are a self-supporting agency. When it comes to revenue for expenditures, we're going to have to make some adjustments," he said. Increases in license fees last year will lessen the effect of lost deer hunting revenue this year somewhat, he said. "But it will not fully make up for lost revenue from the reduction of licenses the commission proposed."

GF&P and the commission looked long and hard before proposing the steep cuts in antlerless deer tags, Cooper said. While nonresident hunters equate South Dakota with its world-class pheasant hunting, "a lot of residents are attached to deer hunting," Cooper said.

Food banks also might feel the effect. The state's food banks customarily accept out-of-100,000 pounds of venison. Gassen said. "Feeding South Dakota Executive Director Matt Gassen, most of that is deer. "It's a significant source of protein for us, and one of the food groups you can't afford to lose is protein," Gassen said.

In the best interest

Jerry Awe, a director with the Safari Club International Sioux Empire chapter, thinks hunters generally trust GF&P to manage herds for the benefit of wildlife and hunters. Safari Club International represents more than 55,000 hunters in almost 200 chapters across the country.

"You always hate to see hunting opportunities lessen, but if the deer population is down, and it is in the best interest of the stocks and fishing and hunting opportunities in the future (to limit doe harvest now), that's where we stand with GF&P," Awe said. "We don't have an adverse position we're taking against them."

While a dedicated minority of deer hunters avidly pursues does, most South Dakota deer hunters seek bucks, Leif said.

"Many are in agreement to sacrifice opportunities to shoot antlerless deer today in better hopes of shooting a buck in the future," he said.

Big game species such as deer don't respond as quickly as pheasants to favorable changes in habitat, weather and hunting pressure.

"We know this isn’t going to be a one-year bounce back. It doesn’t work that way with big game," Cooper said.

The aggressive harvest targets of recent years are a thing of the past, but during the next four years or so the commission will become gradually more generous with antlerless deer tags as deer numbers rebound, Cooper predicted.

"The goal is to start coming back on an incline to build the herd," he said. "Hopefully, next year’s proposals won’t be for as steep a reduction as now."

New study aims to protect Lake Sharpe baitfish

The inch long black radio transmitter slipped neatly into the small incision despite the patient’s lack of cooperation. It was a large adult gizzard shad caught in the northern end of Hipple Lake and was expressing its displeasure at being outfitted with a radio transmitter by flopping out of its surgical cradle. Game, Fish and Parks Department Senior Fisheries Biologist Mark Fincel, meanwhile, was struggling to keep the shad still as he sewed the hole shut.

The fish was the last of the day’s take from the Hipple Lake and would spend the next few months of its life sending radio pings from its new transmitter to receivers located up and down Lake Sharpe as part of a first-of-its-kind study of the lake’s primary baitfish.

"Right now there isn’t a lot of information about gizzard shad movement," Fincel said. The new study has to goals. The first is to determine how important Hipple Lake, which is connected to Lake Sharpe through a narrow channel between Farm Island and the shoreline, is to gizzard shad spawning. The second is to figure out where the warm water bait fish weather South Dakota’s harsh winters, Fincel said.

"We think we have the bulk of our reproduction in Hipple Lake," said Fisheries Biologist Mark Fincel. "There are so many shad hatched each year that Gizzard shad make up more than 90 percent of the prey eaten by Lake Sharpe's walleye and small mouth bass."

"We think the water in Lake Sharpe is that to the river… That was the impetus behind the study." Hipple Lake's connection to Lake Sharpe was nearly silted in during the 2011 flooding. After pheasant hunting, deer hunting is GF&P's largest revenue source. The revenue hit from the sharp reduction in deer tags is yet to be determined, Cooper said. Meanwhile, the number of pheasant hunters has declined three straight years. As a result, "we're not as fat as we were four years ago on the revenue stream," Cooper said.

Sportsmen-women...Want to help fund SDWF and the Youth Conservation Camp plus reduce your taxes this year? Donate stocks and land to the SDWF. You won't only have to pay taxes on those assets, you will pay less tax because of your generosity!